

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/050500

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C01B3/38 B01J8/06 B01J8/00 B01J8/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C01B B01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, COMPENDEX, API Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4 650 651 A (FUDERER ANDRIJA) 17 March 1987 (1987-03-17) column 5, line 52 - column 6, line 51; figure	1-11
Y	EP 1 146 009 A (AIR PROD & CHEM) 17 October 2001 (2001-10-17) paragraph '0014! - paragraph '0020!; claims; figure 1A	1-11
X	GB 1 093 943 A (ICI LTD) 6 December 1967 (1967-12-06) page 3, line 10 - line 50; figure	1-11
X	NL 8 403 144 A (STAMICARBON) 16 May 1986 (1986-05-16) page 4, line 3 - page 5, line 4; figure 1	1
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- *&* document member of the same patent family

Date of the actual completion of the international search

13 August 2004

Date of mailing of the international search report

20/08/2004

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/55027 A (FARNELL PETER WILLIAM ; ICI PLC (GB)) 2 August 2001 (2001-08-02) page 3, line 6 - page 4, line 35; figure -----	1
X	EP 0 440 258 A (TOPSOE HALDOR AS) 7 August 1991 (1991-08-07) figure 1 -----	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/050500

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4650651	A	17-03-1987	CA 1285899 C CN 87100591 A GB 2199841 A ,B IN 167731 A1 US 4822521 A	09-07-1991 20-07-1988 20-07-1988 15-12-1990 18-04-1989
EP 1146009	A	17-10-2001	US 6521143 B1 EP 1146009 A1 SG 94800 A1	18-02-2003 17-10-2001 18-03-2003
GB 1093943	A	06-12-1967	NONE	
NL 8403144	A	16-05-1986	NONE	
WO 0155027	A	02-08-2001	AU 2530701 A EP 1252090 A1 WO 0155027 A1 JP 2003520747 T	07-08-2001 30-10-2002 02-08-2001 08-07-2003
EP 0440258	A	07-08-1991	DK 28390 A AT 113260 T AU 624759 B2 AU 7017391 A CA 2035331 A1 CN 1056850 A ,B CS 9100248 A2 DE 69104735 D1 EP 0440258 A2 ES 2065556 T3 JP 1954871 C JP 4215837 A JP 6075670 B SK 279079 B6 RU 2053957 C1 US 5167933 A ZA 9101771 A	03-08-1991 15-11-1994 18-06-1992 08-08-1991 03-08-1991 11-12-1991 13-08-1991 01-12-1994 07-08-1991 16-02-1995 28-07-1995 06-08-1992 28-09-1994 03-06-1998 10-02-1996 01-12-1992 27-11-1991